Before the
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Preserving the Open Internet	)	GN Docket No. 09-191
	)	
Broadband Industry Practices	)	WC Docket No. 07-52

REPLY COMMENTS OF SKYPE COMMUNICATIONS S.A.R.L.

SKYPE COMMUNICATIONS S.A.R.L.

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TABLE OF CONTENTS

SUMMARY

The time for the Commission to act to preserve an open Internet is now. Swift action will remove the regulatory uncertainty affecting application providers, network owners and consumers. The Commission should place its openness policy on a firm legal foundation to encourage investment in the edge and at the core of broadband networks. Additional delay leaves consumers without a "cop on the beat" when network operators harm consumers by restricting access to lawful applications and content in the Internet ecosystem.

The recent industry discussions revealed a measure of consensus regarding openness rules for broadband Internet access networks, and the Commission should endorse what emerged as a significant consensus in several key areas, including: (1) the application of the Commission's *Broadband Policy Statement* principles to protect the consumer's right to use Skype and other voice and video applications that compete with the network operators' own offerings regardless of whether such consumers are accessing the Internet on a wired or wireless connection; (2) the need for transparency of broadband network operators' service offerings; (3) the need for a nondiscrimination principle to protect the important innovation interests at stake; (4) the importance of carriers' reasonable network management practices; and (5) the need for case-by-case enforcement of the open Internet principles that is flexible and takes into account rapidly changing technology, service offerings, and market conditions.

Rules codifying the consensus described above would be a significant step forward in the effort to protect consumers' open Internet experience. However, the Commission must resolve the questions relating to wireless broadband services and specialized services in a way that protects consumers and preserves — and indeed spurs — the growth of the broadband ecosystem.

As consumers' broadband Internet usage continues to evolve, it is important that the Commission's policies remain technologically neutral and that artificial distinctions between wired and wireless access to the Internet be discarded. The Commission's open Internet policies will not fully protect consumers and innovation throughout the broadband ecosystem if they exclude wireless broadband networks, since consumers increasingly expect similar Internet experiences across all broadband connections. Moreover, a policy that does not make artificial distinctions between wired and wireless broadband access networks is not only about protecting consumer expectations, it is also essential to promoting innovation and investment in broadband networks. Policies that are technologically neutral ensure that there is no regulatory bias toward particular providers, and that providers compete on the basis of the quality of the service provided to consumers.

With respect to specialized services, such services may provide consumers with additional choices, but they should (i) not retard the growth of our nation's open, best-efforts Internet infrastructure, (ii) not substitute for the open, best-efforts Internet, (iii) be subject to FCC enforcement against anticompetitive

arrangements; and (iv) not harm traffic traveling over the open, best-efforts Internet. Skype supports a balanced approach to specialized services that ensures that network operators who offer such services on a non-exclusive basis will be entitled to a presumption of reasonableness. In addition, with respect to specialized services that offer consumers guaranteed quality of service (QoS), such services should be presumed to be reasonable if it is the consumer — and not the network operator — that controls the decision to prioritize certain traffic.

The Commission should reject the approach suggested by several broadband network operators under which services that are not classified as broadband Internet access but that are delivered via the same facilities used to deliver broadband access services would be entirely beyond the scope of the Commission's authority. While the precise nature of Commission oversight should be determined as specific services develop in the marketplace — and it may very well be that new services are not subject to any regulatory requirements — the Commission should retain oversight authority over bottleneck network facilities to address abusive behavior.

Finally, the Commission should enforce the proposed open Internet rules using a case-by-case approach. The open Internet rules contemplated by the Commission, with broad rules and case-by-case enforcement — rather than detailed prescriptive rules — preserve flexibility for network operators while providing a backstop against conduct that would interfere with a well-functioning broadband ecosystem.

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Skype Communications S.A.R.L. ("Skype") hereby files these reply comments in response to the Commission's September 1, 2010 Public Notice ("PN" or "Notice") in the above-captioned proceedings.[1]

I. THE COMMISSION MUST ACT TO PROTECT AND PRESERVE AN OPEN INTERNET

The time for the Commission to act to preserve an open Internet is now. Swift action will remove the regulatory uncertainty affecting application providers, network owners and consumers. The Commission should place its openness policy on a firm legal foundation to encourage investment in the edge and at the core of broadband networks. Additional delay leaves consumers without a "cop on the beat" when network operators harm consumers by restricting access to lawful applications and content in the Internet ecosystem.

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[1] *Further Inquiry Into Two Under-Developed Issues in the Open Internet Proceeding*, Public Notice, GN Docket No. 09-191, WC Docket No. 07-52, DA 10-1667 (rel. Sep. 1, 2010).

The record in this and prior proceedings regarding wireless broadband networks is more than sufficient for the Commission to act. In 2007, Skype filed a petition ("Skype Petition") seeking "any device" and "any application" rules for wireless networks — so-called wireless *Carterfone* rules.[2] The Skype Petition raised many of the same issues regarding openness rules in the context of wireless networks, and led to the submissions of thousands of pages of information into the record.[3] Later in 2007, the Commission considered and later adopted openness conditions for the 700 MHz C Block auction — conditions that are similar to the rules proposed in this proceeding.[4] The 700 MHz service rules were adopted after a vigorous debate, including numerous comments filed by

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[2] Skype Communications S.A.R.L., *Petition to Confirm A Consumer's Right To Use Internet Software and Attach Devices to Wireless Networks*, RM-11361 (filed Feb. 20, 2007). Since filing the Skype Petition and prior to the commencement of this proceeding, Skype continued to advocate for openness policies for all broadband networks, including wireless. *See, e.g.*, Reply Comments of Skype Communications S.A.R.L., RM-11361 (filed May 15, 2007); Letter from Christopher D. Libertelli, Senior Director, Government and Regulatory Affairs, Skype Communications S.A.R.L. to Chairman Kevin J. Martin, *Ex Parte* submission in WC Docket Nos. 06-150 & 06-129, PS Docket No. 06-229, and WT Docket No. 96-86 (filed July 10, 2007) (arguing in favor of openness conditions with respect to the 700 MHz auction); Reply Comments of Skype Communications S.A.R.L., WT Docket No. 09-66, at 5-7 (filed July 13, 2009) (arguing that a complete examination of competition in the wireless industry must consider not only services offered by wireless carriers but also open access to mobile applications and devices); *Reply Comments of Skype Communications, S.A.R.L.*, WT Docket No. 09-66, at 2-6 (filed Oct. 22, 2009).

[3] Skype requests that the Commission incorporate the Skype Petition docket, RM-11361, into this rulemaking to inform the Commission's consideration of openness issues, particularly with respect to wireless broadband networks.

[4] *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, WT Docket No. 06-150, FCC 07-132, at 75-93, ¶¶ 189-230 (rel. Aug. 10, 2007) ("700 MHz Order"); *see also* 47 C.F.R. § 27.16.

individual consumers in support of openness on wireless networks.[5]

As far as the broader question of open Internet rules for all broadband networks, including wired broadband networks, the Commission has considered these issues since at least 2005, when the Commission released its *Broadband Policy Statement* with four principles aimed at preserving an open Internet.[6] In 2007, the Commission commenced a *Notice of Inquiry* on broadband industry practices that sought and received comment on broadband network management practices and the need for openness rules.[7] A few months later, the Commission considered a complaint against Comcast Corp. for its throttling of bittorrent traffic, and eventually found that Comcast had violated the Commission's policies designed to protect an open Internet.[8] This proceeding led to more vigorous debate on the importance of an open Internet and the validity of "reasonable network management" practices, including three public *en banc*

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[5] The Commission received over 250,000 comments from individuals in support of open access rules.

[6] *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, CC Docket No. 02-33, *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, CS Docket No. 02-52, Policy Statement, FCC 05-151 (rel. Sep. 23, 2005) ("Broadband Policy Statement").

[7] *Broadband Industry Practices*, Notice of Inquiry, WC Docket No. 07-52, FCC 07-31 (rel. Apr. 16, 2007).

[8] *Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications*, Memorandum Opinion and Order, File No. EB-08-IH-1518, WC Docket No. 07-52, FCC 08-183, at 31-32, ¶¶ 52-53 (rel. Aug. 20, 2008); *vacated*, *Comcast Corp. v. FCC*, 600 F.3d 642 (D.C. Cir. 2010).

hearings on the topic.[9] Finally, since it commenced this proceeding, the Commission has received over 10,000 filings debating open Internet rules, and has led industry negotiations to develop a framework for such rules.

In summary, the Commission has more than enough information and support to act to protect openness on broadband networks. Nothing has changed with respect to the need and the urgency for openness rules since Chairman Genachowski's speech just over a year ago, when he stated:

> [T]he fact that the Internet is evolving rapidly does not mean we can, or should, abandon the underlying values fostered by an open network, or the important goal of setting rules of the road to protect the free and open Internet.
>
> Saying nothing — and doing nothing — would impose its own form of unacceptable cost. It would deprive innovators and investors of confidence that the free and open Internet we depend upon today will still be here tomorrow. It would deny the benefits of predictable rules of the road to all players in the Internet ecosystem. And it would be a dangerous retreat from the core principle of openness — the freedom to innovate without permission — that has been a hallmark of the Internet since its inception, and has made it so stunningly successful as a platform for innovation, opportunity, and prosperity.[10]

Moreover, the recent industry discussions revealed a measure of consensus regarding openness rules for broadband Internet access networks, and the Commission should endorse what emerged as a significant consensus in

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[9] The Commission held the three hearings from February through July of 2008 in Cambridge, MA, Palo Alto, CA, and Pittsburgh, PA. *See* http://www.fcc.gov/broadband_network_management/.

[10] *Preserving a Free and Open Internet: A Platform for Innovation, Opportunity, and Prosperity*, Remarks of FCC Chairman Julius Genachowski, The Brookings Institution, Washington, D.C., Sep. 21, 2009.

several key areas, including: (1) the application of the Commission's *Broadband Policy Statement* principles to protect the consumer's right to use Skype and other voice and video applications that compete with the network operators' own offerings regardless of whether such consumers are accessing the Internet on a wired or wireless connection; (2) the need for transparency of broadband network operators' service offerings; (3) the need for a nondiscrimination principle to protect the important innovation interests at stake; (4) the importance of carriers' reasonable network management practices; and (5) the need for case-by-case enforcement of the open Internet principles that is flexible and takes into account rapidly changing technology, service offerings, and market conditions.[11]

Rules codifying the consensus described above would be a significant step forward in the effort to protect consumers' open Internet experience. However, as discussed below, there are several critical areas of disagreement that the Commission must resolve in a way that protects consumers and preserves — and indeed spurs — the growth of the broadband ecosystem.

[11] *See* PN at 1-2.

II. OPEN INTERNET PRINCIPLES SHOULD APPLY TO *ALL* BROADBAND INTERNET ACCESS NETWORKS, INCLUDING WIRELESS

As consumers' broadband Internet usage continues to evolve, it is important that the Commission's policies remain technologically neutral and that artificial distinctions between wired and wireless access to the Internet be discarded. As mentioned above, the recent industry discussions resulted in a consensus that at a minimum, a "no blocking" rule should apply to voice and video applications that compete with broadband network operators' own service offerings. However, Skype believes that the Commission's policies should go further and ensure technologically neutral application of open Internet principles across all broadband platforms.

The Commission's open Internet policies will not fully protect consumers and innovation throughout the broadband ecosystem if they exclude wireless broadband networks. Though wireless broadband still lags behind wired broadband options both in terms of market share and capacity, there is little doubt that the trend in the broadband access market is toward greater usage of wireless networks — particularly as smart phones, tablet computers, and other mobile computing devices grow in popularity. This trend toward wireless is especially true for young, minority, and rural broadband consumers.[12] As this

[12] *See* Joint Center for Political and Economic Studies, Washington, DC, *National Minority Broadband Adoption: Comparative Trends in Adoption, Acceptance and Use* (rel. Feb. 2010), *available at* http://www.jointcenter.org/publications1/publication-PDFs/MTI_BROADBAND_REPORT_2.pdf.

trend continues, it is vital that the Commission protect openness across all broadband networks, including wireless networks.

Consumers increasingly expect similar Internet experiences across all broadband connections. For example, a Skype user may use Skype to communicate with a friend via a laptop computer using a DSL or cable broadband Internet access connection, a smartphone or tablet computer on a 3G or 4G wireless broadband network, or an Internet-enabled television. In some cases, the user may begin a call on a wired home network and move seamlessly to a 3G mobile connection in a car and end on a fixed network at the office. Such a user rightly expects to be able to use Skype on all broadband access networks which he or she has paid for.

A policy that does not make artificial distinctions between wired and wireless broadband access networks is not only about protecting consumer expectations, it is also essential to promoting innovation and investment in broadband networks. Policies that are technologically neutral ensure that there is no regulatory bias toward particular providers, and that providers compete on the basis of the quality of the service provided to consumers. As NCTA has argued in this proceeding, "principles of regulatory parity dictate that marketplace outcomes not be unfairly and uneconomically skewed by artificial regulatory advantages."[13] In arguing in favor of technological neutrality in its

[13] Comments of the National Cable & Telecommunications Association at 46 (filed Jan. 14, 2010) ("NCTA Initial Comments"); *see also* Comments of Comcast Corp. at 32 (filed

recent comments, NCTA correctly noted that "an arbitrary exemption for one broadband technology or sector while others are made subject to [open Internet] requirements would disserve consumers and skew the development of broadband services."[14] By applying the proposed rules across all broadband networks, the Commission would "establish a consistent regulatory framework across broadband platforms by regulating like services in a similar manner."[15]

Wireless carriers have opposed the application of openness principles to wireless broadband networks, making two main arguments in the process. First, they argue that the wireless broadband marketplace is competitive and that wireless broadband consumers benefit from a vast array of choices with respect

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Jan. 14, 2010) (arguing that any openness requirements adopted by the Commission should apply to all broadband platforms to "mitigate potential marketplace distortions") ("Comcast Initial Comments"); Comments of CenturyLink at 22-23 (filed Jan. 14, 2010) ("Wireline broadband service providers face the same problems as wireless providers — including the need to protect networks, manage capacity, and find incremental revenue. Wireless providers must expect to compete on the same playing field. The Commission cannot reasonably apply the proposed rules . . . more leniently based on a broadband service provider's technology."); Comments of ADTRAN at 15-16 (filed Jan. 14, 2010) ("If the Commission nevertheless decides to move forward with adopting rules, it must do so in a manner that does not favor particular technologies or rivals. … By way of example, if the Commission affords wireless Internet service providers with significantly greater flexibility than wireline providers to address capacity shortages by "throttling back" traffic, then wireless providers would have an artificial cost advantage because they could "manage" their way through congestion, rather than having to construct more capacity.").

[14] Comments of the National Cable & Telecommunications Association at 14-15 (filed Oct. 12, 2010) ("NCTA PN Comments").

[15] *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks*, Declaratory Ruling, WT Docket No. 07-53, FCC 07-30, at 2, ¶ 2 (rel. Mar. 23, 2007).

to devices and applications that can be used on wireless networks.[16] Second, they argue that the technical characteristics of wireless networks create unique challenges that make the application of openness rules to wireless networks impossible.[17] These arguments are discussed below.

A. Openness Rules Should Apply to Wireless Networks Regardless of the State of Competition in the Wireless Broadband Market

As Skype has discussed previously, the wireless broadband industry, while somewhat more competitive than the wireline industry, still lacks sufficient competition to protect consumer choice and provide greater incentives for innovation in all parts of the wireless ecosystem.[18] The question before the Commission is not — as the carriers would have the Commission believe — whether there is some level of retail competition in wireless. The question is whether we can do better than existing levels of competition and unleash even more innovation and choice in wireless, built on solid open Internet protections.

In addition, structural realities in the wireless market counsel against the FCC resting on its laurels in the wireless space. Spectrum acquisition remains a significant barrier to entry in the wireless marketplace, and wireless spectrum auctions often result in the largest carriers acquiring more spectrum and

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[16] Comments of Verizon and Verizon Wireless at 12-16 (filed Oct. 12, 2010) ("Verizon PN Comments"); Comments of AT&T Inc. at 39-40 (filed Oct. 12, 2010) ("AT&T PN Comments").

[17] Comments of CTIA — The Wireless Association at 8-11 (filed Oct. 12, 2010) ("CTIA PN Comments"); Verizon PN Comments at 16-20; AT&T PN Comments at 57-63.

[18] *See* Reply Comments of Skype Communications S.A.R.L., WT Docket No. 09-66, at 6-14 (filed Oct. 22, 2009).

strengthening their position in the market.[19] The Department of Justice has described the structural deficiencies of the wireless market, noting that two of the largest wireless carriers are also two of the largest wireline carriers, giving them mixed incentives to encourage consumer substitution between wireline and wireless broadband services.[20] These same two carriers also control middle-mile special access facilities in most of the country, disadvantaging smaller carriers who rely on their competitors for these critical inputs.[21] And these competitive

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[19] *See, e.g.*, Comments of the Consumer Federation of America, *et al.*, Docket No. 09-66, at 24 (Sept. 30, 2009) ("At present, market concentration and consolidation have increased spectrum acquisition barriers for new entrants while simultaneously consolidating the lion's share of spectrum holdings into the hands of the two largest wireless providers. The Commission's flexible spectrum allocation and secondary markets policies have not done enough to counter-balance these effects.").

[20] *Ex Parte* Submission of the United States Department of Justice, GN Docket No. 09-51, at 11 (Jan. 4, 2010) ("DoJ *Ex Parte*") ("[T]wo of the major providers of [LTE] services (Verizon and AT&T) also offer wireline services in major portions of the country, raising the question of whether they will position their LTE services as replacements for wireline services, either within the region where they provide wireline services or elsewhere."). As DoJ notes, tower and antenna siting issues also hinder wireless broadband competition from smaller providers. *Id.* at 21 n.57. *See also* 700 MHz Order at 298 (Separate statement of Commissioner Michael J. Copps) ("And now we live in a world where the two leading ***wireless*** companies are owned in whole or in part by the leading ***wireline*** telephone companies. It is no knock on these companies to say that they may be more than a little reluctant to employ their spectrum holdings to put price and quality pressure on their wireline broadband products.").

[21] DoJ *Ex Parte* at 21 n.57; *see also* Comments of Sprint Nextel Corporation, GN Docket No. 09-51, at 9-10 (filed June 8, 2009) ("The longstanding problems caused by lack of competition for special access have been exacerbated by mega-mergers in the telecommunications industry. For example, AT&T and Verizon both strengthened their already significant competitive advantages by absorbing the two leading competitive providers (MCI and legacy AT&T) of DSI and DS3 transmission links, thereby eliminating these entities as independent competitors. AT&T's merger with BellSouth also consolidated control of Cingular (now AT&T Mobility), increasing AT&T's incentives to raise the costs of its wireless rivals through increased special access prices.").

concerns are heightened in rural areas, where many consumers do not have the same range of choices that their urban counterparts have, and where smaller rural carriers do not have access to the newest devices and innovations.[22]

Moreover, as the Commission recognized in the *Notice*, openness rules are needed to protect innovation regardless of the specific level of competition in the network — *i.e.*, more competition in the wireless market, while no doubt desirable, may not be enough to prevent network operators from blocking or discriminating against certain innovative applications.[23]

In her recent book, *Internet Architecture and Innovation*, Dr. Barbara van Schewick of Stanford Law School explains that network operators may have common incentives and abilities to discriminate against third party content or applications that are not necessarily addressed by increased facilities-based competition.[24] As explained by Dr. van Schewick, there are three main reasons for this conclusion. First, the ability of a wireless carrier to exclude third party

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[22] *See, e.g.*, Statement of John D. Rockefeller, IV at Hearing of the Senate Committee on Commerce, Science & Transportation, *The Consumer Wireless Experience* (June 17, 2009) ("I am extremely concerned for my great state of West Virginia that we have second-class wireless service in too many communities throughout America."); Comments of U.S. Cellular, Docket Nos. 09-157, 09-51, 09-66, at 9 (filed Sep. 30, 2009) ("Despite their size and huge spectrum holdings, the Big Four carriers have decided not to serve many rural areas."); Comments of Cellular South, Docket No. 09-66, at 3 (filed Sep. 30, 2009) ("[E]xclusive device arrangements between national wireless carriers and device manufacturers are distorting the wireless marketplace and interfering with the opportunity of small rural and regional carriers to acquire new and popular devices for their customers.").

[23] *Notice* at 29, ¶¶ 67-69.

[24] Barbara van Schewick, INTERNET ARCHITECTURE AND INNOVATION at 255-64 (MIT Press, 2010) ("van Schewick, INTERNET ARCHITECTURE").

applications depends less on monopoly position or market share in the market for broadband services and more on the characteristics of network technology and the terminating access monopoly that each carrier possesses.[25]

Second, all network operators may have a common incentive to discriminate against third party content and applications (*i.e.*, engage in exclusionary conduct in the complementary market for Internet content and apps) — incentives that may be heightened because of the inability to extract monopoly rents with respect to the price of broadband services.[26] In this context, competition is effective in discouraging discriminatory network operator practices only if consumers are well-informed. However, broadband consumers may not realize that network operators are interfering with a particular application. Unlike price, which is generally transparent and therefore something that consumers will respond to when choosing among competitors, network operators' practices of blocking or discrimination against applications is often opaque to consumers and therefore far less responsive to competitive forces.

Finally, consumers who may wish to switch broadband providers face

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[25] *Id.* at 256. The Commission is familiar with the concerns of terminating access monopolies in other network contexts. *See Access Charge Reform; Reform of Access Charges Imposed by Competitive Local Exchange Carriers*, CC Docket No. 96-262, FCC 01-146, 16 FCC Rcd 9923, 9934-35, ¶ 28 (2001) (discussing the difficulties posed by the terminating access monopoly, and noting that "providers of terminating access may be particularly insulated from the effects of competition ….").

[26] van Schewick, INTERNET ARCHITECTURE at 259-61.

high switching costs.[27] The high switching costs faced by consumers is further evidence that while the wireless market is more competitive than many other telecom markets, it is far from sufficiently competitive for the Commission to relax its oversight of openness conditions.[28]

Thus, regardless of the specific level of competition in the wireless market, openness rules are needed and must be applicable to all network operators to protect consumers and facilitate continued innovation at the application layer.

In short, the Commission's policies should reflect the view that we can do better by giving consumers more competitive choices, both by adopting policies that encourage greater facilities-based competition but also by adopting openness rules for wireless networks that spur multi-modal competition from edge providers of wireless applications. Openness rules provide basic "rules of the road" that provide certainty to all — network operators, applications developers, device manufacturers, and, most importantly, consumers.

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[27] *Id.* at 261-64.

[28] A study submitted earlier in this proceeding by the Open Internet Coalition estimated the effective switching cost — arising from investment in carrier-specific handsets, learning, and contractual obligations — for a consumer switching between carriers is approximately $230. Joseph Cullen & Oleksandr Shcherbakov, *Measuring Consumer Switching Costs in the Wireless Industry*, April 5, 2010, Attachment to Reply Comments filed by the Open Internet Coalition, GN Docket No. 09-191, WC Docket No. 07-52 (Apr. 26, 2010).

B. Technological Differences Between Wireless and Wired Broadband Networks Do Not Justify Excluding Wireless Networks from the Purview of Openness Policies

Differences between wireless and wired broadband networks do not justify excluding wireless networks from the Commission's proposed open Internet rules. Wireless broadband providers have argued frequently that wireless networks should not be subject to open Internet policies because they are technologically different from wired networks and face differing concerns stemming from scarce and shared spectrum resources, the mobility of wireless broadband users, etc.[29] However, there is simply no reason to exclude wireless networks from the purview of the proposed open Internet rules.

As an initial matter, the technological differences between wireless and wired networks have been overstated. All broadband networks may face capacity constraints at different times, and some wired networks, such as cable broadband networks, use shared capacity.[30] While the mobility of users of wireless networks may result in additional challenges, the other technological factors discussed by providers of wireless broadband services are analogous to

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[29] *See, e.g.*, Verizon PN Comments at 16-20; AT&T PN Comments at 57-63; *see also* Howard Buskirk, *Wireless Carriers "Literally Can't" Comply With Tougher Net Neutrality Rules, Largent Warns*, Comm. Daily, Aug. 18, 2010, at 1-2 ("We literally can't [comply with open Internet rules]. . . . It's not a matter of our will is not willing to bend. That's not the case. It's that we technically can't meet a lot of the [requirements." (quoting CTIA President Steve Largent)).

[30] NCTA PN Comments at 11-12; Comments of Time Warner Cable Inc. at 33-34 (filed Oct. 12, 2010) ("TWC PN Comments").

— and not categorically different from — issues that concern all broadband network operators.

Nevertheless, Skype and others have long agreed that wireless broadband networks may pose different network management challenges, and that the application of open Internet rules may be different on wireless vs. wired networks in order to reflect such differences.[31] However, there is no reason to exclude categorically wireless broadband networks from open Internet policies. The "reasonable network management" provision proposed in the *Notice of Proposed Rulemaking* is broad enough to account for differences between wireless and wired broadband networks — the definition of what is "reasonable" network management for wireless broadband networks will account for the technical differences of such networks and may differ from what is reasonable for wired networks.[32] Moreover, the Commission's case-by-case enforcement of

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[31] *See, e.g.*, Reply Comments of Skype Communications S.A.R.L., RM-11361, at 15 (May 15, 2007) ("Skype recognizes that there are technical differences between applying the Commission's Broadband Policy Statement to wireless networks and applying it to wireline networks."); Comments of Skype Communications S.A.R.L. at 5-6 (filed Jan. 14, 2010) ("Skype agrees . . . that the technical characteristics of wireless networks could justify network management practices that differ from those used by wireline broadband services. . . . The exception for "reasonable network management" is flexible enough to address different broadband platforms — what is not reasonable for a fiber-based broadband network may be reasonable for in a bandwidth-constrained wireless network.") ("Skype Initial Comments").

[32] *See* Skype Initial Comments at 6; Comments of Google Inc. at iii (filed Jan. 14, 2010) ("The policy framework adopted in this proceeding should be network agnostic, applying across both wireline and wireless broadband infrastructure. . . . That said, there is little doubt that the wireless sector has its own unique characteristics, and its own unique technical challenges and constraints in dealing with Internet traffic flows. The Commission's framework certainly can and should account for these factors in evaluating 'reasonable network management.'"); NCTA Initial Comments at 46 ("It may

open Internet rules can and should take into account the particular characteristics of different broadband Internet access services.

Apart from such differences in the application of rules, there is no need for the broadly-stated open Internet principles not to apply to all broadband Internet access networks.[33]

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Ultimately, the question in this proceeding is not, as CTIA contends, whether there is some level of competition and innovation in wireless — Skype agrees that there is — the question is: will openness safeguards improve upon

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be the case that broadband Internet access service providers face different operational issues in attempting to manage their networks depending on any unique aspects of their particular networks regardless of the technology employed. But, beyond that, there is no basis for differentiating among specific broadband Internet access technologies — current or future — with respect to the applicability of any rules ultimately adopted."); CDT Comments at 3 ("Reasonable traffic management in the wireless context should still focus on the amount of bandwidth being used, rather than singling out specific content, applications, services for special treatment.").

[33] *See* Skype Initial Comments at 5-7; Comments of the Open Internet Coalition at 36-41 (filed Jan. 14, 2010) ("OIC Initial Comments"); Reply Comments of the Open Internet Coalition at 16-23 (filed April 26, 2010); Comments of Google at iii (filed Jan. 14, 2010) ("The policy framework adopted in this proceeding should be network agnostic, applying across both wireline and wireless broadband infrastructure. . . . Consumers enjoy services and applications across networks and expect seamless integration, usage and utility, regardless of whether the underlying networks are wired or wireless.") ("Google Initial Comments"); NCTA Initial Comments at 46 (arguing that while implementation may be different across different types of networks, "there is no basis for differentiating among specific broadband Internet access technologies – current or future – with respect to the applicability of any rules ultimately adopted."); Comcast Initial Comments at 32 ("Differences between broadband technologies are not grounds for exempting any particular type of platform from the objectives of this proceeding."); Comments of Center for Democracy & Technology at 3 and 51 (filed Jan. 14, 2010) ("[T]he Internet openness rules should apply to all broadband Internet access service delivery platforms, including **wireless.** Wireless networks may require more aggressive traffic management… failing to address wireless would leave a gaping hole in a policy meant to promote openness or nondiscrimination on the Internet.").

existing levels of competition and innovation and establish a policy framework that helps reverse the slide in the United States international broadband rankings? The answer is yes. By providing a measure of certainty for all parts of the broadband ecosystem, the Commission will provide greater incentives for innovation across the wireless marketplace, driving demand for broadband services.

Implicit in the critiques of openness policy is that openness rules will somehow restrict or inhibit innovation.[34] There is, however, no evidence that supports such a claim. Verizon, for example, does not envision a drop in innovation as it deploys 4G networks subject to the openness requirements in the 700 MHz C Block service rules — rules that are similar to those proposed in this proceeding in that they are broadly stated and accompanied by case-by-case enforcement, as opposed to detailed prescriptive rules. Moreover, commenters that argue against the application of openness rules to wireless networks are not simply trying to ensure that they have sufficient flexibility to manage their networks — instead, they are arguing that network operators should have the unreviewable discretion to block applications and pick winners and losers. Thus, they are in reality arguing for *no rules* and *no government policy* that would protect a consumer's open Internet experience.[35] Neither the interests of carriers,

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[34] *See, e.g.*, TWC PN Comments at 6; CTIA PN Comments at 8-10; AT&T PN Comments at 3-12.

[35] At noted above, there appears to be no disagreement on a "no blocking" rule for voice, video, and other applications that compete with network operators' offerings.

application providers nor consumers will be served by such an irresponsibly radical and deregulatory approach.[36]

Skype seeks out partnerships with wireless carriers around the world when such partnerships serve the needs of Skype users.[37] Such partnerships are an important aspect of the wireless ecosystem and not foreclosed by the proposed openness rules. However, Skype also continues to offer its software application on a direct-to-consumer basis via app stores and the Skype website, and continues to support openness policies that allow consumers to make such choices. Allowing consumers to access the wireless apps and content of their choice (subject, of course, to reasonable network management), while continuing to permit business arrangements between complementary products and services in the wireless broadband ecosystem, best protects an environment for innovation and consumer choice across the wireless broadband market. Finally, though Verizon appears to suggest that Skype no longer supports openness on wireless networks and has "effectively conceded" that partnering with wireless

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[36] As discussed above, the need for Open Internet rules arises because of network operators' control over last-mile broadband Internet access networks and the terminating access monopoly they possess with respect to broadband consumers. Accordingly, the focus of the Commission's policies should be on wireless carriers and not on edge-based applications or app stores or other entities that do not operate networks.

[37] *See, e.g.*, Reply Comments of Skype Communications S.A.R.L., GN Docket No. 09-157, GN Docket No. 09-51, at 8-10 (filed Nov. 5, 2009) (discussing partnership between Skype and European and Asian carrier Hutchinson 3); *Verizon Wireless and Skype Join Forces to Create a Global Mobile Calling Community*, Press Release, Feb. 16, 2010 (describing strategic relationship between Skype and Verizon Wireless announced at the 2010 Mobile World Congress in Barcelona, Spain).

carriers is preferable to a direct-to-consumer mobile app, such a suggestion is simply not true.[38]

III. SPECIALIZED SERVICES MAY PROVIDE CONSUMERS WITH ADDITIONAL CHOICES, BUT COMPETITIVE CONCERNS AND THE RISK OF ANTICOMPETITIVE CONDUCT REMAIN

Specialized services may provide consumers with additional choices, but still pose risks to competition in the marketplace for IP-based services. The Commission correctly identifies the risks associated with specialized services.[39] Specialized services are delivered over the same last-mile facilities used to provide broadband Internet access services, meaning that the same competitive concerns that exist in the broadband market exist in the market for specialized services. Moreover, as discussed in the PN, the concern persists that specialized services may be used to bypass open Internet protections, supplant broadband services subject to open Internet protections that are delivered over the same facilities, or allow network operators to skew unfairly the market for specialized services by using their control over last-mile facilities to engage in anti-

[38] Verizon PN Comments at 39-40. The specific example cited by Verizon, where Skype decided to discontinue offering a particular version of its application that ran on the Windows Mobile, had nothing to do with Skype's openness advocacy and everything to do with technical issues with regard to the way Windows Mobile APIs interacted with the Skype client. Skype continues to offer versions of its software on other mobile operating systems that are available for direct download by consumers, including versions for the iPhone, Symbian phones, and Android phones.

[39] PN at 2-3.

competitive conduct.[40]

In Skype's view, specialized services may provide consumers with additional choices, but they should (i) not retard the growth of our nation's open, best-efforts Internet infrastructure, (ii) not substitute for the open, best-efforts Internet, (iii) be subject to FCC enforcement against anticompetitive arrangements; and (iv) not harm traffic traveling over the open, best-efforts Internet.

In this regard, Skype believes that specialized services may offer consumers more choices and that services that enhance the consumer experience should be permitted. However, given the competition-related concerns stemming from network operators' bottleneck control over last-mile facilities, the Commission must play a role in providing a backstop against anti-competitive conduct.

Specifically, Skype supports a balanced approach to specialized services that ensures that network operators who offer such services on a non-exclusive basis will be entitled to a presumption of reasonableness. Importantly this protection does not mean that network operators cannot engage in exclusive arrangements for specialized services; only that doing so will fall outside of the relevant safe harbor. Should such exclusive arrangements be challenged, network operators should be required to demonstrate that such exclusivity, on

[40] PN at 2-3.

balance, benefits consumers.

In addition, with respect to specialized services that offer consumers guaranteed quality of service (QoS), such services should be presumed to be reasonable if it is the consumer — and not the network operator — that controls the decision to prioritize certain traffic. As Skype has previously explained in this proceeding, traffic prioritization and other network management techniques that put broadband subscribers in charge do not raise the same discrimination concerns as prioritization controlled by owners of bottleneck facilities.[41]

IV. THE COMMISSION SHOULD MAKE CLEAR THAT IT HAS AUTHORITY OVER EACH SERVICE OFFERED BY A NETWORK OPERATOR

The Commission should reject the approach suggested by several broadband network operators under which services that are not classified as broadband Internet access but that are delivered via the same facilities used to deliver broadband access services would be entirely beyond the scope of the Commission's authority.[42]

While Skype agrees that the Commission should generally permit carriers to offer new services without subjecting them to detailed, prescriptive regulation, no network-based service should be deemed to be entirely outside the Commission's authority. In the case of broadband network operators, the

[41] Skype Initial Comments at 16-20.

[42] *See, e.g.*, Verizon PN Comments at 67-79; NCTA PN Comments at 5.

operators' bottleneck control over last-mile facilities and their terminating access monopolies with respect to their subscribers give rise to concerns of discrimination by network operators against third party applications and content. These concerns extend to any service offered via the same bottleneck facilities.

Of course, the Commission's oversight over communications services is circumscribed by the statutory classification of the specific services at issue. However, as the Commission considers the policy rationale behind its oversight, it is the control over bottleneck networks and facilities that gives rise to the need for Commission oversight.[43] Vital Commission policies could be easily circumvented if network operators can simply avoid all oversight for certain services, while other services delivered over the same networks are subject to oversight because of concerns of bottleneck control over the network facilities. While the precise nature of Commission oversight should be determined as specific services develop in the marketplace — and it may very well be that new services are not subject to any regulatory requirements — the Commission should retain oversight authority over bottleneck network facilities to address abusive behavior.

[43] *See generally* van Schewick, INTERNET ARCHITECTURE at 256-70.

V. CASE-BY-CASE ENFORCEMENT OF THE COMMISSION'S OPEN INTERNET PRINCIPLES IS THE CORRECT APPROACH

The Commission should enforce the proposed open Internet rules using a case-by-case approach. Throughout this proceeding, network operators express their concern that open Internet rules will restrict their ability to offer new and innovative services, stifle growth, and/or manage their networks to handle growing traffic demands.[44] However, the open Internet rules contemplated by the Commission, with broad rules and case-by-case enforcement — rather than detailed prescriptive rules — preserve such flexibility for network operators while providing a backstop against conduct that would interfere with a well-functioning broadband ecosystem.

Skype and other Internet companies depend on open Internet policies to be able to reach consumers directly without the fear of being blocked or discriminated against. At the same time, such companies also depend on robust broadband networks with sufficient speeds to deliver traffic associated with their respective websites and applications. Moreover, where there is a business case to do so, Internet companies enter into joint marketing and other business arrangements with broadband access providers that are not foreclosed by the proposed rules. Thus, Skype and other Internet companies have every incentive to ensure that broadband network operators are not subject to detailed,

[44] *See, e.g.*, TWC PN Comments at 6; CTIA PN Comments at 8-10; AT&T PN Comments at 3-12.

prescriptive rules that may have unforeseen consequences and that may stifle investment by network operators.

A case-by-case enforcement approach allows the Commission to ensure that broadband Internet access networks operate consistently with broad open Internet principles, while allowing network operators the flexibility to grow their service offerings and network management practices. The Commission would retain the authority to protect consumers and take action in the face of anticompetitive conduct or other conduct that harms consumers, while permitting sufficient flexibility for operators to manage their respective networks and avoiding the prohibition of as yet unanticipated services. The Commission's goal should not be to micromanage network management practices or dictate network architecture and deployment, but to enact and enforce policies that provide a backstop against harmful conduct and an alternative to unfettered network operator control over the broadband ecosystem.

Many parties, including Skype, have stressed the need for a measure of regulatory certainty in the broadband ecosystem.[45] Perfect regulatory certainty is an elusive goal and exists nowhere in the Communications Act. That said, on the margins a case by case approach has the benefit of sharing uncertainty equally across the Internet ecosystem while retaining core protections against blocking useful applications such as Skype.

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[45] *See, e.g.*, Reply Comments of Skype Communications S.A.R.L., GN Docket No. 09-157, GN Docket No. 09-51, at 13-16 (filed Nov. 5, 2009).

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Respectfully submitted,

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